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REMARKS

The above Amendments and these Remarks are submitted under 35 U.S.C. §1.111 in response to the Office Action mailed on December 13, 2007.

Summary of the Examiner's Office Action Dated December 13, 2007

The Examiner has rejected Claims 19-28 under 35 U.S.C. § 112, second paragraph for indefiniteness of Claim 19 for placing the term "bio-agents" in parentheses. The Examiner has also rejected Claims 19-28 under 35 U.S.C. §103(a) as being unpatentable over Cha (U.S. Patent No. 6,187,988) in view of Galloway (U.S. Patent No. 5,292,695).

Summary of the Applicant's Response

The Applicant has amended Claim 19 to remove the §112 rejection by deleting the parentheses around "bio-agents" and to include the phrase "other hazardous organic chemicals." The amendment is fully supported in the specification; see the first sentence of paragraph 3, on page 1, and the sentence of paragraph 15, on page 4, of the specification. It is clear that the method of the present invention not only destroys the bio-agents, but other organic hazardous organics that can kill if they are allowed to remain on the adsorbent after steam reforming the bed containing the bio-agents.

The Applicant has amended Claim 19 to emphasize the criticality of timing of the response to a bio-agent detection to more clearly distinguish the method of the present invention from that disclosed in the Cha reference. Specifically step (c) has been amended to now claim that the detection takes place within the first 20 minutes of the presence of bio-agents in the enclosed space. This is supported in the specification in paragraph 18 on page 5. Cha is completely devoid of any concept of the criticality of timing in their microwave treatment method.

Claim 19 has also been amended to include the limitation of Claim 25 of operating the reforming reaction, step (g) at temperatures of at least 1800°F, which Claim 25 has been cancelled. Such a high temperatures is required to not only kill the bio-agents, but to completely destroy them and the other organic hazardous materials. This is supported not only in Claim 5, but in the specification in paragraph 18 on page 5. In contrast, Cha teaches an ambient temperature system of microwave treatment. There is no teaching in Cha that his microwave

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treatment method results in destruction of the hazardous materials so that the treated bed can be placed into further use.

Finally, Claim 19 has also been amended to include limitation of Claim 22 of using a second filter, which Claim 22 has been cancelled. This is not to add redundancy to the method, but to allow the detection to continue when the bed of the first filter is being reactivated. This is supported not only in Claim 22, but in FIG. 1 and the specification in paragraph 13 on page 3. There is no suggestion in the prior art for such a second filter.

In summary, Claims 23 and 25 have been cancelled and Claims 19-21, 23-24, 26-28 remain in the case.

Response to Rejection of Claims 19-28 as being unpatentable over Cha in view of Galloway

Claim 19 has been amended to clearly overcome the rejection of claims of Claims 19-28 as being unpatentable over Cha in view of Galloway.

The prior art references are completely devoid of any suggestion of the criticality of the timing events of the method. The first timing event is the detection of the bio-agents within the first 20 minutes of the presence of bio-agents in the enclosed space. The second timing event is to seal off the circulation of air from the enclosed space in which the bio-agent has been detected from the other enclosed spaces after a sufficient evacuation time has elapsed.

The Cha reference entire teachings is limited to using microwaves to treat hazardous matter that has been adsorbed on a bed of carbonaceous material at conditions of ambient temperature and pressure (see column 3, line 26). In column 2, lines 23-36, Cha distinguishes the use of microwaves of his method from the use of plasma at high temperatures. Therefore, Cha teaches away from using high temperatures as in the Applicant's presently claimed method.

Cha does not disclose or suggest that the bed has been treated in such a manner that the bed is ready to use after treatment. The Applicant's presently claimed method requires that the bed in the first filter be reactivated and ready for going on-line when the bed in the second filter requires reactivation.

The Examiner states that it would be obvious to one skilled in the art to detect hazardous materials that should be treated. Even if the latter is true, what is certainly not obvious to such a person is that bio-agents can be destroyed. The Applicant has unexpectedly found that the hydrogen in the syn-gas used in the reforming step penetrates into the pores of the adsorbent

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containing the bio-agents and this penetration is the essential factor in allowing for completely destruction of the bio-agents.

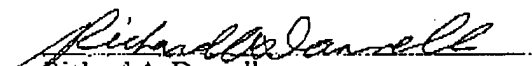
The Examiner cites Galloway for its teaching of passing steam and syn-gas to destroy any bio-agents. Applicant respectfully traverses this reading of Galloway. The entire teaching of Galloway is destroying organic compounds. There no suggestion in the Galloway reference of destroying bio-agents. As pointed out above, it was unexpectedly found that passing steam and syn-gas will destroy any bio-agents adsorbed on a filter bed.

The Examiner states that a mere duplication of parts as in the plurality of filter has no patentable significance unless there are unexpected results. It has been unexpectedly found that there is sufficient time to reactive a bed in a first filter and place the first filter back on line during the time the possibly bio-agent-containing air is being adsorbed in the bed in the second filter.

Conclusion

In view of the amendment to the claims and the foregoing remarks, Applicant has shown that Claims 19-21, 23-24, 26-28 are inventively and patentably distinguishable over Cha in view of Galloway. Applicant respectfully submits that the foregoing claims remaining in the present application are allowable. Such allowance is respectfully solicited. If a telephone conference would expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (415) 984-8200.

Respectfully submitted,


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